

REMARKS

Claims 1-16 are rejected under 35 USC §102(e) are being anticipated by Yadav et al., WO 98/56854.

Independent claim 1 recites a biocompatible photonic crystal comprising a multilayered structure of a plurality of biocompatible materials that are assembled to have a spatial variation of index of refraction that is in one or more directions. At least one of the biocompatible materials is digestible.

Independent claim 15 recites a biocompatible structure comprising a multilayered structure that includes plurality of biocompatible materials that are arranged to define a photonic crystal.

Independent claim 16 recites a biocompatible coating comprising a photonic crystal structure that includes a multilayered structure having a plurality of biocompatible materials.

Yadav et al. '854 describes a nanocomposite structure comprising a nanostructure filler or carrier intimately mixed with a matrix. The nanostructure filler has a domain size sufficiently small to alter an electrical, magnetic, optical, electrochemical, chemical, thermal, biomedical, or tribological property of either filter or composite by at least 20%.

Yadav et al. '854 does not recite a biocompatible photonic structure that includes a multilayered structure. In particular, Yadav et al. '854 describes mixing nano-scaled fillers with a matrix material, which is preferable polymeric, but also can be ceramic and/or metallic to form a nano-scale composite structure. However, the teachings in Yadav et al. '854 do not describe forming a photonic crystal structure. For a reference to anticipate a claim, it must

show all elements recited in a claim. As recited in claims 1, 15, and 16, the limitation of a photonic crystal is not taught by Yadov et al. '854. The nanostructure formed in Yadav et al. '854 would not lead one of ordinary skill in the art to inherently anticipate the claimed photonic crystal having a *multilayered structure* that includes a plurality of biocompatible materials. In addition, there is no discussion that the nanostructure formed in Yadov et al. '854 are digested or in other words eaten. Furthermore, the scale at which the invention operates is at the meta-scale and not the nano-scale. Therefore, Yadov et al. '854 does not anticipate claims 1, 15, and 16, respectively.

As to claims 3-14, they are dependent on claim 1, respectively. Therefore, claims 43-14 are also allowable for the same reasons argued with respect to claim 1

Claim 1 is rejected under 35 USC §102(e) as being anticipated by Braun et al., US 6,409,907.

Braun et al. '907 describes a structure, for example, a photonic band gap material, exhibiting substantial periodicity on a micro scale is provided. Fabrication involves the steps of providing a colloidal crystal, placing the template in an electrolytic solution, electrochemically forming a lattice material, for example, a high refractive index material, on the colloidal crystal, and then removing the colloidal crystal particles to form the desired structure.

Braun et al. '907 does not recite a photonic crystal a having a multilayered structure having a plurality of biocompatible that are assembled to have a spatial variation of index of refraction that is in one or more directions. In particular, Braun et al. '907 describes forming

a photonic crystal structure that involves the steps of providing a template comprising a colloidal crystal, placing the template in an electrolytic solution, and electrochemically forming a lattice material, e.g., a high refractive index material, within the colloidal crystal. Note that there is no discussion of forming a multilayered structure as recited in claim 1. The multilayered structure, as claimed, does not use a colloidal crystal to form a photonic crystal. Therefore, Braun et al. '907 does not anticipate claim 1.

In view of the above amendments and for all the reasons set forth above, the Examiner is respectfully requested to reconsider and withdraw the objections and rejections made under 35 U.S.C. §102. Accordingly, an early indication of allowability is earnestly solicited.

If the Examiner has any questions regarding matters pending in this application, please feel free to contact the undersigned below.

Respectfully submitted,



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